

NOTES ON HABITATS AND PARASITOIDS OF
SOME CERAMBYCIDAE OF WESTERN WASHINGTON

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ABSTRACT

Original information on larval habitats and insect associates is presented for 15 species of cerambycids. Associates include Hymenoptera (Braconidae, Ichneumonidae, Eurytomidae, Pteromalidae, Eupelmidae), Coleoptera (Elateridae), and Neuroptera (Raphidiidae). Coniferous hosts are cited for *Plectrura spinicauda*.

A recent study of the insect fauna of dead Douglas-fir trees has produced new information on some cerambycids of western Washington. During this study cerambycid larvae and their associates were reared in 100 × 15 mm. Optilux Petri dishes (Falcon Plastics, Oxnard, Calif.). Immature insects accompanied by a small piece of bark or wood were placed on a small pad of paper toweling in the petri dishes; the toweling was moistened with a few drops of water every other day. Reared specimens are in the author's collection.

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Dicentrus blunthneri LeConte. This is the most abundant cerambycid in shaded fallen branches of Douglas-fir in western Washington. The life cycle is completed in one year; pupation occurs in early spring. Parasitoids of *D. blunthneri* include the ichneumonid *Helcostizus albator albator* (Thunberg) and the undescribed braconid *Ontsira* sp. *Eurytoma picea* Bugbee (Eurytomidae) occurs as a hyperparasite of *H. albator*, but it may attack *D. blunthneri* as well. A specimen of *Calosota pseudotugae* Burks was reared from the cocoon of one of the parasitoids; this eupelmid is normally a hyperparasitoid of scolytids. A raphidiid, *Agulla adnixa* Hagen, was also reared from galleries of *D. blunthneri*; although this species consumes larval *D. blunthneri* in the laboratory, it does not normally have access to occupied galleries in the field.

Plectrura spinicauda Mannerheim. Specimens were reared from branches of Douglas-fir and from a small *Tsuga heterophylla*. Host material ranged from 1.5-5 cm. in diameter, had been dead for no more than 1 year, and was lying on the ground in dense shade. Previously recorded hosts of *P. spinicauda* are *Acer glabrum*, *A. macrophyllum*, *Alnus rubra*, *A. sitchensis* (Hardy and Preece 1926), and *Oplopanax horridum* (Clark 1956).

Opsimus quadrilineatus Mannerheim. This species is apparently the most abundant cerambycid in sound wood of suppressed standing Douglas-fir in western Washington.

Eumichthus oedipus LeConte. One adult and several presumably conspecific larvae were found during October in a dry exposed dead branch of a live *Tsuga heterophylla* on the edge of the beach on Puget Sound. The previously known host is Douglas-fir (Linsley 1964).

Leptura obliterated Haldeman. This species is a common inhabitant of exposed conifers, particularly stumps of cut trees. Larvae are parasitized by the braconid *Wroughtonia necydalis* (Cushman) and attacked by larvae of an unidentified asilid.

Monochamus scutellatus oregonensis LeConte. This is a common species in large exposed conifers. An unreported but not unexpected host found during the present study was *Tsuga heterophylla*.

Evodinus monticola vancouveri Casey. Larvae feed on succulent phloem of tops of shaded Douglas-fir and *Tsuga heterophylla*. Adults appear in early spring to feed, fight, and mate on woodland flowers such as *Trillium ovatum* and *Berberis nervosa*. Eggs are laid in fissures in the bark of recently killed trees.

Clytus pacificus Van Dyke. Larvae feed in the phloem and the surface of the sapwood of exposed Douglas-fir branches. Pupae and teneral adults are present in early spring. An undescribed pteromalid, *Neocatolaccus* sp., is a parasitoid of *C. pacificus*.

Xestoleptura behrensii LeConte. Two specimens were reared from soft rotton wood of shaded Douglas-fir.

Holopleura marginata LeConte. Larvae and teneral adults were found during April in fallen partly shaded Douglas-fir branches. Parasitoids include the ichneumonid *Helcostizus albator* (Thunberg) and the braconids *Ontsira* n. sp. and *Atanycolus longifemoralis* Shenefelt. The latter species was represented by two abnormally small males and is probably not a normal parasitoid of *H. marginata*. An elaterid larva was found consuming a larval *H. marginata*; this elaterid, fed larval scolytids and cerambycids in the laboratory, eventually transformed into an adult identified as *Ampedus anthracinus* LeConte.

Callidium antennatum Newman. This species was found only in exposed or partially exposed Douglas-fir. Branches as small as 2.7 cm. were attacked.

Phymatodes aeneus LeConte. This species was found breeding in small shaded Douglas-fir branches; it is parasitized by the ichneumonid *Helcostizus albator albator* (Thunberg).

Phymatodes maculicollis LeConte. Specimens reared from dry shaded Douglas-fir branches are entirely black, except for teneral specimens which have temporary testaceous lateral areas on the pronotum. *Phymatodes maculicollis* is parasitized by the ichneumonid *Helcostizus albator albator* (Thunberg), the eurytomid *Eurytoma picea* Bugbee, and the braconid *Allodorus* sp. Elaterid larvae were found consuming larval *P. maculicollis*; two of these larvae were reared to adults and proved to be *Ampedus anthracinus* LeConte.

Phymatodes nitidus LeConte. This species is common in shaded branches of *Thuja plicata*; the larvae are parasitized by the ichneumonid *Helcostizus albator albator* (Thunberg).

Leptalia macilenta (Mannerheim). Teneral adults were found during April under bark of a large shaded *Alnus rubra*.

Parasitoid records from unidentified cerambycid larvae

Doryctes fartus (Provancher) (Braconidae). This species is a parasitoid of small subcortical cerambycid and buprestid larvae in exposed Douglas-fir and *Tsuga heterophylla*.

Spathius sequoiae Ashmead (Braconidae) and *Dinotiscus acuta* (Provancher) (Pteromalidae). These species are normally parasitoids of scolytids in shaded conifers but occasionally attack small subcortical cerambycid larvae.

Xorides cincticornis (Cresson) (Ichneumonidae) and *Dolichomitus pygmaeus* (Walsh) (Ichneumonidae). A single specimen of each species was reared from subcortical cerambycid larvae in shaded Douglas-fir.

LITERATURE CITED

- CLARK, M. E. 1956. An annotated list of the Coleoptera taken at or near Terrace, British Columbia, part III. Proc. Ent. Soc. B. C. 52: 39-43.
- HARDY, G. A., and W. H. A. PREECE. 1926. Notes on some species of Cerambycidae (Col.) from the southern portion of Vancouver Island, B.C. Pan-Pac. Ent. 3:34-40.
- LINSLEY, E. G. 1964. The Cerambycidae of North America. Part V. Taxonomy and classification of the subfamily Cerambycinae, tribes Callichrominae through Ancylocerinae. Univ. Calif. Publ. Ent. 22:1-197.